

# HDR LOS Links Project

## Objective

- Develop technologies to implement reliable 1536 kbps LOS communications links using just 480 kHz 3dB BW / 600 kHz Channel.
- LOS links to form the low-cost backbone of the JMCOMS wireless communication network for ship-to-ship/sub/shore/air voice, video, and data connectivity.

## Approach

- A: Software Simulations / Channel Estimation
- B: Modem Techniques (MAEQ/OFDM)
- C: Theoretical Performance Prediction
- D: Equipment Development, Test, Deployment

## Highlights

- Published over 20 papers, documents, and reports.
- Equipment deployed on USS Lincoln BG (FY95), Boxer ARG (FY97), and USS Tarawa ARG (FY98).
- Prototype Hardware under development: (1) M-PSK MAEQ -> ViaSAT Corp. (CA), (2) Dual Diversity OFDM -> NOVA Eng. (OH)

## Naval Impact

- Provides an inexpensive means for surface combatants to receive/transmit voice, video, email/web browse/ftp/etc (SIPRNET & NIPRNET) both within the BG/ARG and to shore via SATCOM/BLOS assets on big decks.
- New capabilities for SPAWAR SLICE/DMR & JPO PMCS
- Technology enabler for IT-21 and HDR GBS reachback.

